

CLAIMS

1 - 19. Canceled.

20. (Previously presented) Composite article comprising a substrate, a reflective layer and a titanium dioxide-based photocatalytic layer, said article being characterized in that the reflective layer is composed of an oxidized or nitrated metal such that the total light reflection integrated over the entire visible range of the composite article is in the range of between 40 and 75%.

21. (Previously presented) Article according to Claim 20, characterized in that oxidized or nitrated metal of the reflective layer is in an under-stoichiometric state.

22. (Previously presented) Article according to Claim 20, characterized by one of the following:

- a) the layers are disposed on the same face of the substrate, or
- b) the reflective layer is disposed on the rear face and the photocatalytic layer is disposed on the front face of the substrate.

23. (Previously presented) Article according to Claim 20, characterized by at least one of the following:

- a) a barrier layer between the photocatalytic layer and the substrate, or
- b) a surface layer on the front face, or
- c) the light reflection integrated over the entire visible range lies between 45% and 70%.

24. (Previously presented) Article according to Claim 23, characterized by any two of a) or b) or c).

25. (Previously presented) Article according to Claim 23, characterized by all of a) and b) and c).

26. (Previously presented) Article according to Claim 20, characterized by at least one of the following (a), (b), (c) or (d).

(a) the reflective layer has a thickness

(i) in the range of between 20 and 100 nm or;

(ii) in the range of between 30 and 60 nm;

(b) the photocatalytic layer has a thickness

(i) in the range of between 20 and 120 nm or;

(ii) in the range of between 40 and 75 nm;

(c) the article comprises a barrier layer between the photocatalytic layer and the substrate, the barrier layer having a thickness

(i) in the range of between 10 and 80 nm, or;

(ii) in the range of between 20 and 60 nm;

(d) the article comprises a surface layer on the front face, the surface layer having a thickness

(i) in the range of between 2 and 10 nm, or;

(ii) in the range of between 3 and 6 nm.

27. (Previously presented) Article according to Claim 26, including at least two of the features (a), (b), (c) or (d).

28. (Previously presented) Article according to Claim 26, including all of the features (a), (b), (c) and (d).

29. (Previously presented) Article according to Claim 20, characterized in that the metal of the reflective layer is selected from Cr, Ti, Al, Si, Zr and the alloys of these metals.

30. (Previously presented) Article according to Claim 20, characterized in that it comprises at least one of (a) a silicon oxide barrier layer between the photocatalytic layer and the substrate or (b) a silicon oxide surface layer on the front face.

31. (Previously presented) Article according to Claim 20, characterized by one of the following (a) or (b)

(a) in that when the reflected colour is neutral (i.e. when the coefficients a^* and b^* of the Lab system are between -5 and 5), the reflection factor lies

(i) between 55 and 75%, or

(ii) between 60 and 72%;

(b) in that when the reflected colour is within the blue range, (i.e. when the coefficient a^* of the Lab system are between -10 and 0 and the coefficient b^* of the Lab system is less than -10, the reflection factor lies

(i) between 40 and 55%, or

(ii) between 40 and 50%.

32. (Withdrawn) Process for preparing a composite article, characterized in that it comprises the following steps:

depositing a lightly oxidized or nitrated metal layer on one or other of the faces of a support by cathodic magnetron sputtering in a controlled reactive atmosphere;

depositing a photocatalytic layer (40) on the front face of the support by cathodic magnetron sputtering;

thermal treating for a period of between 15 minutes to 6 hours

- (i) at a temperature in the range of between 300 and 500°C, or
- (ii) at a temperature in the range of between 350 and 450 °C.

33. (Withdrawn) Process according to Claim 32, characterized in that it comprises a step of depositing a SiO₂ barrier layer by cathodic sputtering prior to depositing the photocatalytic layer.

34. (Withdrawn) Process according to Claim 32, characterized in that it comprises a step of depositing a fine hydrophilic surface layer by cathodic magnetron sputtering.

35. (Withdrawn) Process according to Claim 33, characterized in that it comprises a step of depositing a fine hydrophilic surface layer by cathodic magnetron sputtering.

36. (Currently amended) Use as a rear-view mirror of a motor vehicle of the composite article

- a) according to Claim 20, or

b) — made according to Claim 32.